4 ways to register:

Registration Form

By Phone:
(517) 394-4614 or
(866) 423-7233

By Mail: Fill out application below and mail to:
Industrial Ventilation Conference
3315 S. Pennsylvania Ave.
Lansing, Michigan 48910

On-Line:
www.safetycouncil.org/ivc

By Fax: Fax application to (517) 394-1117

Cancellation Policy: An administrative fee of $25 per person will be charged for refund requests received in writing by January 6, 2004. An administrative fee of $200 per person will be charged for refund requests received after January 6, 2004. No-shows will not receive a refund, however you may send a substitute participant. In the unlikely event of cancellation by the sponsors, liability to the participants is limited to the refund of the registration fee.

On-site Registration: Registration hours at Kellogg Center are 5–7 p.m. Sunday, February 8. The registration desk will also be open Monday morning from 7 a.m. to 8:30 a.m. For registration information, call (517) 394-4614 or toll-free (866) 423-7233.

Fee: The fee includes all course supplies, lunches Monday through Thursday, and the Wednesday night banquet. The additional fee for the Friday workshop includes the workshop materials and mid-morning refreshments. Full payment should be made payable in U.S. funds to **Michigan State University.** Since class sizes are limited, early registration is suggested.

Location: The conference will be held at the Kellogg Hotel & Conference Center, Michigan State University, East Lansing, Michigan. It is readily accessible from all expressways via US-127 or I-496. Travelers should take Exit 9 on to Trowbridge Road, turn left on Harrison Road and travel north 3/4 of a mile to the parking ramp adjacent to the center. Free bus transportation will be available between Lansing's Capital City Airport and Kellogg Center on Sunday, February 8 from 3–6 p.m. and again Thursday, February 12 from 5–6 p.m.

Certification Credits: The American Board of Industrial Hygiene has awarded 3.5 Certification Maintenance points to Certified Industrial Hygienists (CIH) who satisfactorily complete this conference.

Yes!

Enroll me today for the

Industrial Ventilation Conference

February 9-12, 2004
Kellogg Hotel &
Conference Center
Michigan State University
East Lansing, Michigan

4-Day Conference Course
(Feb. 9-12) Fee: $599
$550 if paid before Jan. 6

Extra Half-Day
Troubleshooting Workshop
(Feb. 13) Fee: $85

Conference information
(517) 322-6560

Lodging information
1 (800) 875-5090

Please provide the following information:

(If you wish to send more than one person, please duplicate this form.)

Name _____

Title _____

Employer's Name _____

Mailing Address _____

City _____ State _____ Zip _____

Phone _____ Fax _____

E-mail Address _____

Check PROBLEM SESSION desired:

- ❑ Ventilation System Design
- ❑ Advanced Ventilation System Design
- ❑ Nonstandard Air Designs
- ❑ Plant Engineering

Note: If you are unsure about the session level, see SELF-PLACEMENT QUESTIONNAIRE on the other side of this form. Level changes can be made on first day of the conference.

Registration Fee:

- ❑ $599 — 4-day Conference Course, Monday-Thursday, February 9-12
- ❑ $85 — Extra Half-Day Workshop, Friday, February 13
- ❑ $550 — EARLY BIRD REGISTRATION. 4-day course paid before January 6, 2004

Payment Method
Charge this registration to: ❑ VISA ❑ MasterCard ❑ AMEX

Credit Card Number _____

Expiration Date _____

Signature _____

clip page and mail

53rd Annual Industrial Ventilation Conference

February 9-12 • 2004

Kellogg Hotel & Conference Center
Michigan State University
East Lansing, Michigan

Four days of advanced training! **Plus** an extra half-day Troubleshooting Workshop!

Conference Registration (517)394-4614 or (866)423-7233
Lodging at the Kellogg Center (800)875-5090
Further Conference Information (517)322-6560

2004/2005 Industrial Ventilation Conferences:

North Carolina State
(919)233-8400
April 19-23, 2004

Auburn/UAB
(205)934-8994
October 18-21, 2004

UNLV
(702)895-3598
TBA

Michigan State
(517)322-6560
February 7-10, 2005

Who Should Attend?

- Plant Engineers
- Industrial Hygenists
- Plant Managers
- Sheet Metal Contractors
- Consulting Engineers
- Risk Managers
- Anyone involved in ventilation system design, maintenance and performance

Ensure your place in class. Register today!

Sponsored by MIOSHA

3315 S. Pennsylvania Ave.
Lansing, Michigan 48910

ADDRESS SERVICE REQUESTED

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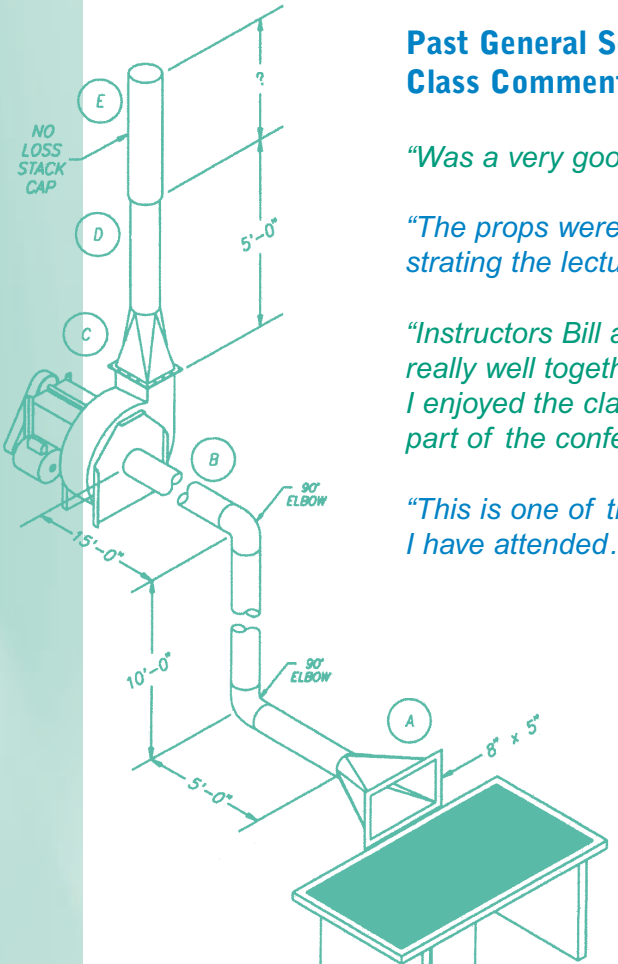

Past General Session and Class Comments:

"Was a very good conference…"

"The props were excellent at demonstrating the lecture—thank you…"

*"Instructors Bill and George worked really well together—
I enjoyed the class time! The best part of the conference…!"*

"This is one of the best seminars I have attended…"

53rd Annual Industrial Ventilation Conference

February 9-12 • 2004

Kellogg Hotel & Conference Center
Michigan State University
East Lansing, Michigan

Four days of advanced training! **Plus** an extra half-day Troubleshooting Workshop!

Industrial ventilation experts from across the U.S. and Canada will provide instruction and lectures on the design, construction, use, and testing of ventilation systems. The conference offers an introductory course and three advanced courses of instruction.

Sponsored by MIOSHA

Register today! Call 517-394-4614 or 866-423-7233

Classroom Sessions

The conference includes more than 20 hours of classroom experience in which the registrant will have the opportunity to work out actual design problems. At least two staff members will lead each classroom design section of about 20 registrants.

Each registrant will receive classroom materials that include the most recent edition of the ACGIH publication *Industrial Ventilation, a Manual of Recommended Practice*, various other technical publications, and plans and specifications for specific ventilation systems to be designed. **Registrants must bring a scientific calculator capable of performing square root and exponent functions for use during classroom sessions.**

Registrants should pick the class session that best fits their ability, past experience and their goals in ventilation design. To help make a selection, please fill out the *Self-Placement Questionnaire* in this flyer and indicate your selection on the *Registration Form*. Changes can be made on Monday, February 9 at 10:30 a.m. For further information, contact Nella Davis-Ray at (517) 322-6560.

Description of Classes

Ventilation System Design These classes are intended for persons who have systems maintenance responsibilities or who do not design ventilation systems regularly. This class is also recommended for persons who have had limited prior experience or specific education in ventilation system design. The problems will emphasize fundamentals of airflow in systems, and will include selection of exhaust hoods, determination of air volume and minimum duct velocity, sizing of ducts, calculation of system pressure losses, and selection of fans and air cleaning devices.

Advanced Ventilation System Design Individuals selecting one of the following options should be thoroughly familiar with exhaust system design procedures or have satisfactorily completed a ventilation system design class at a prior conference.

Nonstandard Air Designs This design section will deal with exhaust systems that involve elevated air temperatures and/or moisture where air density may vary significantly from standard conditions. Such variations often occur in emission control systems, as well as product drying and cooling applications. Air volume and pressure calculations will be made using psychrometric charts in order to determine duct sizes, fan characteristics, and adequate motor horsepower. Alternative starting schemes to bridge standard to nonstandard conditions will be explored.

Plant Engineering Attendance in the *Advanced* or *Non-standard Air Section* is required prior to attending the *Plant Engineering Section*. This design section will deal with problems which involve the air systems in a plant. Included will be industrial processes, standard air and high-temperature air, wall and roof fans selection, noise, and other problems that plant engineers encounter.

Troubleshooting Workshop An optional three-hour session devoted to procedures for troubleshooting a system using the static pressure method.

Conference Staff

*at the time of brochure printing

Nella Davis-Ray,
Conference Chair
Michigan Dept. of Consumer and Industry Services
Lansing, Michigan

William Lykes
Conference Co-chair
Michigan Dept. of Consumer and Industry Services
Lansing, Michigan

George Adams
GM Worldwide Facilities Group
Detroit, Michigan

William Cleary
Ventilation Consulting Services
East Lansing, Michigan

Robert Dayringer
Michigan Dept. of Consumer and Industry Services
Lansing, Michigan

James Friedman
AGRA Simons, Inc.
Minneapolis, Minnesota

William Gault
Consultant
Henderson, Nevada

Tom Godbey
Donaldson-DCE, Inc.
Louisville, Kentucky

Greg Grubb
Michigan State Police
Forensics Lab
Lansing, Michigan

Thomas Gustafson
V.P., Engineering
Hartzell Fan, Inc.

Tom Hamilton
The New York Blower Co.
Willowbrook, Illinois

John Hodgson
Michigan Dept. of Consumer and Industry Services
Lansing, Michigan

William Johnson
Ford Motor Company
Dearborn, Michigan

Dan Josephs
American Filter International
Louisville, Kentucky

Doug Kalinowski
Michigan Dept. of Consumer and Industry Services
Lansing, Michigan

Richard Kline
Consultant
Louisville, Kentucky

Gerhard Knutson
Knutson Ventilation, Inc.
Edina, Minnesota

Gerry Lanham
KBD/Technic, Inc.
Cincinnati, Ohio

John Peck
Michigan Dept. of Consumer and Industry Services
Lansing, Michigan

A. Lee Twombley
Pfeiffer Engineering Co., Inc.
Louisville, Kentucky

Richard Vaillancourt
Consultant
Thetford-Mines, Quebec, Canada

Richard Walli
Walli Engineering. Inc.
Oshawa, Ontario, Canada

P. Gaston White
PGW Consulting Services
Birmingham, Alabama

"Instructors were very knowledgeable and helpful… explained very well…content very involved and thorough…great learning experience. Thanks. Very nice…"

Lodging

A block of rooms has been reserved at the Kellogg Center. Single occupancy is $90. Shared occupancy is $45 per person. **Call 1(800)875-5090 to make reservations.** Requests must be received by January 8, 2003 to guarantee housing priority at the center. If a shared room is requested, please indicate choice of roommate. Kellogg Center reservations will not be held past 6 p.m. unless a guarantee or advance payment is made. Because Kellogg Center housing is limited, reservations are available on a first-come, first-served basis until rooms are filled. **Maps and further details will be provided in a registration confirmation letter.**

Conference Program

Sunday, February 8

5 p.m.–7 p.m.	Registration

Monday, February 9

7 a.m.	Registration
8:30 a.m.	Principles of Air Flow
9:45 a.m.	Principles of Hood Design
10:30 a.m.	Classroom Session—Introduction
1 p.m.	Classroom Sessions
2:15 p.m.	Duct Design and Construction or Psychrometric Review
3:30–5 p.m.	Classroom Sessions
7:30 p.m.	Optional Mathematics Review

Tuesday, February 10

8 a.m.	Classroom Sessions
10 a.m.	Fan Systems Effects
11 a.m.	Classroom Sessions
1 p.m.	Classroom Sessions
2:15 p.m.	Fan Selection or Fan Installation, Operation, and Maintenance
3:30–5 p.m.	Classroom Sessions

Wednesday, February 11

8 a.m.	Classroom Sessions
10 a.m.	Recirculation of Exhaust Air or Fan Sound
11 a.m.	Classroom Sessions
1 p.m.	Classroom Sessions
2:15 p.m.	Replacement Air or Industrial Air Filtration & Dust Control or Oil Mist Control Systems
3:30–5 p.m.	Classroom Sessions
5 p.m.	Cash Bar
6 p.m.	Banquet & Awards

Thursday, February 12

8 a.m.	Classroom Sessions
10 a.m.	Applied Industrial Ventilation or Why Air Monitoring?
11:45 a.m.	Classroom Sessions
1 p.m.	Classroom Sessions
2:15 p.m.	Stack Heights
3:15 p.m.	Classroom Sessions
5 p.m.	Adjourn

Friday, February 13

Optional "Troubleshooting Workshop"
Presented by Gerry Lanham, KBD/Technic and Doug Edwards, PE, KBD/Technic

8 a.m.	Introduction—Needs for maintenance, maintenance scheduling, technical documentation, base-line data at start-up.
8:45 a.m.	Procedure for troubleshooting a system using the static pressure method.
9:45 a.m.	Break
10 a.m.	Application of troubleshooting to a familiar problem
10:45 a.m.	Baghouse/Fan Troubleshooting
12 noon	Adjourn

"I am a rep for Industrial Ventilation/Dust Control/Scrubbers/ Oxidizers. Now I will be able to explain to my clients what they need and why. I will be back next year…"

Self-Placement Questionnaire

Registrants should pick the class session that best fits their ability, past experience and their goals in ventilation design. To make a selection, please fill out this *Self-Placement Questionnaire* and indicate your selection on the *Registration Form* on the reverse side. If you have not attended an industrial ventilation conference previously and do not have significant ventilation system design experience, it is **highly recommended** that you attend a "Ventilation System Design" class. This is an introductory-level course.

Question	Response		Your Score
1. The number of contaminant control hoods, ductwork, fan, and/or collector systems that I have actually designed (as distinguished from drafting) is:	None One or two Several	1 2 3	
2. When it comes to psychrometric charts, I:	Don't understand Can cope Know it well	1 2 3	
3. Concerning the relationship between VP, SP, and TP, I:	Don't understand Think I understand Know it well	1 2 3	
4. Regarding formal courses in fluid dynamics, fluid flow, and/or hydraulics, I have had:	None One Two or more	1 2 3	
5. I have actually designed make-up air or air conditioning for the following situations:	None Commercial or light industry Heavy industry	1 2 3	
	Total Score		

Math Refresher Course

An optional math refresher will be held at 7:30 p.m. on Monday night. This review class is to help students with the calculations relevant to industrial ventilation design. It is intended for anyone who is unfamiliar with the math used or has not used it recently and wants a refresher.

Please compare your total score with the following table.
We strongly recommend that you attend the type of course identified by the table.

Ventilation System Design	0 to 9
Advanced Ventilation System Design	10 to 12
Nonstandard Air Design	13 to 15
Plant Engineering	13 to 15